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OPERATIONAL DESIGN COGNITIVE METHODOLGY: AN ANALYSIS OF COMISAF 30 AUGUST 2009 INITIAL ASSESSMENT

by

Abraham L. Jackson, Major, USAF

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: LTC Kyle Feger

Maxwell Air Force Base, Alabama

April 2010

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Abstract

This research paper applies the Operational Design Cognitive Methodology as prescribed by Dr. Reilly to the COMISAF Initial Assessment of 30 August 2009. The thesis states the Operational Design cognitive methodology described by Dr. Reilly has application to operational planning in a counter-insurgency environment. The paper explains Dr. Reilly's cognitive methodology and its delineation of operational design elements and their relationships between one another from the broader scope of operational art. Next, the paper compiles a relative definition of counter-insurgency operations to provide a framework, or point of departure for analysis of the cognitive methodology applied to counter-insurgency operational design. Elements of operational design are pulled from the COMISAF Initial Assessment with additional analysis on how those elements demonstrate links between each other. The Cognitive Methodology applied to the COMISAF assessment demonstrates how the methodology enhances effectiveness for counter-insurgency operational design and greater whole of government integration.

What is the strategy? Who does the mission effect? Why does this task matter? What should happen next? These questions and more occur every day from the highest and lowest echelons of the USA national security apparatus. Often the strategy is vague. Often the effects are unknown. Often the task is done for the task. Often nothing happens next. Recent events in Afghanistan show the importance of framing the problem to understand USA strategy. The events in Afghanistan demonstrate the complex effects of counter-insurgency military operations. The events in Afghanistan highlight the cascading effects of simple tasks. The events in Afghanistan beg the question of what should happen next.

Leaders and planners from across the agencies involved in the application of national security instruments of power (Diplomatic, Information, Military, and Economic (DIME)) were put to the test to answer these questions for a new President. However, each instrument goes about their own assessment of the strategy, the effects, the tasks, and future separately. In the past nine years the DIME has taken action, felt frustration, lost capabilities, and missed opportunities. To integrate the DIME, a true USA inter-agency operation with coalition partners, a clear iterative process to frame the problem must exist between the instruments of power.

This research paper applies the Operational Design Cognitive Methodology to the Commander International Security Assistance Force (COMISAF) Initial Assessment dated 30 August 2009. Preceding and following the Presidential elections of 2008 the debate of Operation Enduring Freedom, what it should be, what it should do, how long it should last etc. have dominated US and global political military discussions. Lofty goals, radical ideas, long-term investments, and uncertainty broadly describe the bulletin-board of discussion. Political party pundits, retired General officers, and government civilians all share in the debates and discussion. These debates and discussions are simply words and opinion. US Army General

Stanley McCrystal and his staff have the responsibility and privilege of conducting a full joint operation planning process to include detailed operational design.

At all levels of warfare, commanders make decisions. The wisdom, knowledge, and experience used by commanders to make decisions is the art of military command. However, before commanders lead the execution of warfare those same commanders must lead the planning for warfare. Joint publications outline the conduct of operations and procedures for campaign planning. Effective campaign planning provides a structured approach to aid the decision making process for commanders. Commanders must prepare to take advantage of opportunities and avoid undue risk. Use of the Operational Design Cognitive Methodology as prescribed by Dr. Jeffery M. Reilly can enhance decision analysis and identify opportunities for a commander to achieve the military end state.

The paper first examines Dr. Reilly's cognitive methodology and its delineation of operational design elements and their relationships between one another from the broader scope of operational art. Next, the paper compiles a relative definition of counter-insurgency operations to provide a framework, or point of departure for analysis of the cognitive methodology applied to counter-insurgency operational design. Elements of operational design will be pulled from the COMISAF Initial Assessment with analysis on how those elements demonstrate links between each other. Finally, the paper provides analysis of Cognitive Methodology as applied by the COMISAF to determine whether the cognitive method operational design elements enhance effectiveness for COMISAF operational design in the joint operational planning process (JOPP).

Description of the Cognitive Methodology

Operational design provides an unbiased framework for the development of military strategies. Dr. Reilly's cognitive method separates Joint doctrine operational design elements into two parts; problem framing and strategy development.[1] Separating the elements enables a greater capacity to structure the analytical process for overall military and strategic campaign development. Impartial problem framing facilitates the joint operational planning process (JOPP) in steps one and two, initiation and mission analysis.[2] Effective application of the cognitive map enhances campaign development and commander decision making.

The cognitive method uses eight elements in its iterative process, seven from Joint Doctrine and one additional. End state, objectives, effects, centers of gravity, decisive points, lines of operations, and arrangement of operations come from Joint Doctrine. The final element to Dr. Reilly's operational design cognitive method is assumptions.[3] Put together, the eight elements make-up the cognitive method for problem framing in the JOPP. With a focus on the eight elements the cognitive method enables planners to identify the links and effectively match operational actions to achieve mission success.

The focal point of the cognitive map (Figure 1) begins with end state. However, end state receives significant influence from additional factors listed by Dr. Reilly, but not labeled as operational design elements in the cognitive method. The national strategic end state, addressed in the Joint doctrine introduction to operational design, influences the general end state.[4] The "conditions that should exist after the conclusion of a campaign" defines national strategic end state.[5] A commander's understanding of the national end state facilitates development of the military end state and the role of military forces within the context of the strategic guidance.

From the determined military end state commanders must define where military operations should conclude. Listed as an element of operational design in joint publications, termination defines the "conditions that must exist to end military operations."[6] Termination conditions must conform to and influence the military end state. The confluence of national strategic end state, military end state and termination produce the operational design cognitive process end state.

The fundamental analysis used in the development of the cognitive process end state pushes toward objectives clarification. "An objective is a clearly defined, decisive, and attainable goal toward which every military operation should be directed."[7] The objectives of military operations must conform to the greater whole of strategic objectives across the spectrum of government instruments of power. Additionally, objectives for operational design should be succinct and clear, but avoid prescriptive explanations.[8] Objectives explain what to do, not the how to do it.

In order to measure the achievement of objectives operational design must clearly establish effects, both desired and undesired. The effect is the behavior or condition which supports objectives.[9] Often the effect further enables commanders to establish measureable indicators for reaching military objectives to facilitate achieving the end state.[10] Understanding the relationship between objectives and effects provides a critical piece in using the cognitive method to enable optimum decision making during an entire JOPP iteration.

A holistic understanding of the end state, objectives, and effects linkage enables matching centers of gravity at all three levels of warfare. Centers of gravity are "the set of characteristics, capabilities, and sources of power from which a system derives its moral or physical strength, freedom of action, and will to act."[11] Centers of gravity provide focus and "establishes a clear

delineation of priorities and responsibilities."[12] Centers of gravity have a direct link to objectives in the cognitive method. Centers of gravity are dynamic and may change during the course of a campaign.[13] No matter the analytic method, the importance of clearly identifying friendly and enemy centers of gravity significantly impacts the operational design decision making capacity.

Recognition of center of gravity characteristics and continuously reviewing centers of gravity ensures the identification process matures throughout operational design. Dr. Reilly's cognitive method outlines a systems analysis approach to identifying centers of gravity as shown in Table – 1. Political, military, economic, social, infrastructure, and information frame the cognitive method system analysis.[14] Planning the campaign across the spectrum of Joint doctrine phases demonstrates the dynamic and evolutionary nature of centers of gravity among campaign phases. Assessing the actor, objective, strength, weakness, and courses of action against each system enhances operational design knowledge and awareness.[15] The systems analysis provides an additional structure to aid in indentifying cross links between analysis elements; such as a center of gravity actor playing a role in political, military, and economic systems. Using the structured center of gravity identification method ensures the dynamic nature of centers of gravity evolves as friendly and enemy forces strive for effectiveness in the complex environment of warfare.

One additional factor impacting centers of gravity is the distinction between the three levels of warfare. Centers of gravity exist in each level of warfare.[16] Each level of warfare has its particular function and related effects on the objective. However, as shown in Figure – 1 each level has overlap within the context of centers of gravity.[17] Starting with the strategic level centers of gravity a cascading effect works downward to operational and tactical centers of gravity. The single strategic center of gravity expands to more detailed centers of gravity as you

work down the levels of warfare, but each operational and tactical center of gravity links directly upward.[18] The culminating centers of gravity analysis enhances the holistic understanding of the battlespace to enhance command decision making and mission focus.
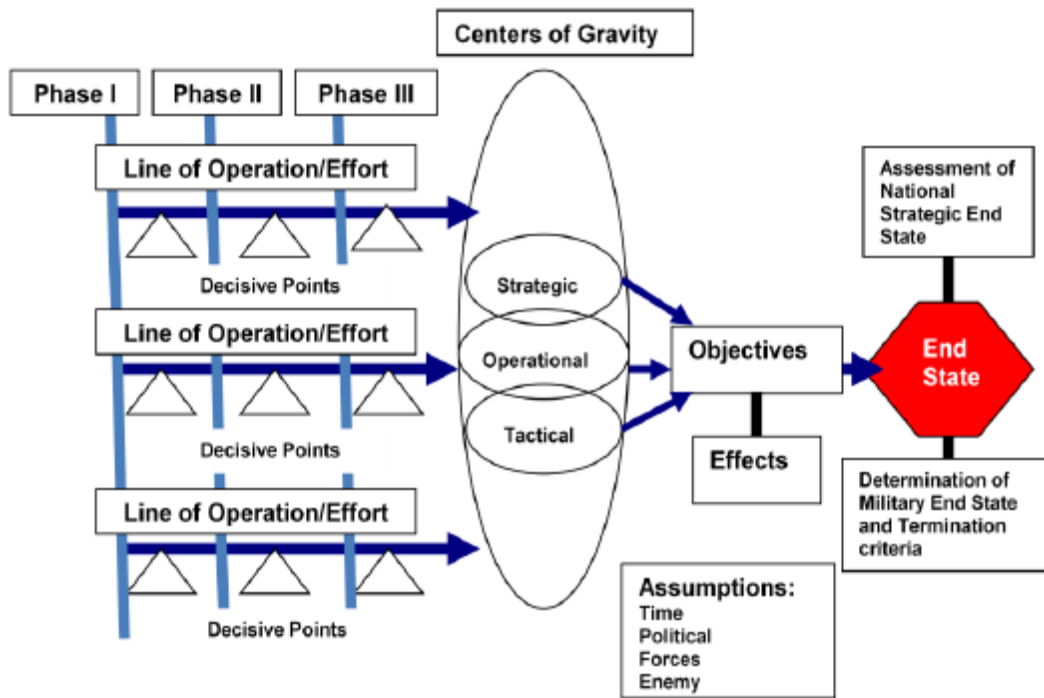

Figure 1 Operational Design Cognitive Map[19]

From the effective centers of gravity identification the cognitive method in accordance with Joint doctrine espouses use of a "critical factor analysis model" to identify decisive points and lines of operation.[20] Critical factor analysis breaks a center of gravity into critical capabilities, critical requirements, and critical vulnerabilities as shown in Figure – 2.[21] Each element requires precise definition for application in the cognitive method.

Critical Factor Analysis Model

Center of Gravity	Critical Capability
Source of power that provides freedom of action, physical strength, and will to fight	Means that are considered crucial enablers for the adversary's COG to function and essential to the accomplishment of the adversary's assumed objective(s)
Critical Vulnerability	**Critical Requirement**
Aspects or components of the adversary's critical requirements which are deficient or vulnerable to direct or indirect attack that will create decisive or significant effects disproportionate to the military resources applied	Those essential conditions, resources, and means for a critical capability to be fully operational

Figure 2 Critical Factor Analysis[22]

Critical capabilities provide the center of gravity the ability to function and accomplish the task or objective. Enemy critical capabilities "put[s] great fear into your heart in the context of your mission and level of war."[23] Critical requirements support the critical capability. The critical requirement provides the essential "conditions, resources, and means."[24] Without the critical requirement the center of gravity does not achieve operational status. Therefore, the deficient or open to attack elements of critical requirements are the critical vulnerabilities.[25] Isolation or neutralization via the critical vulnerability defeats the center of gravity. Completing the critical factors analysis starting with critical capability, then critical requirement, finishing with critical vulnerability identifies those decisive points for attack or defense.

Decisive points emerge in the battlespace as significant places, events, systems, or functions which when acted upon either offensively or defensively facilitate operational success. "Decisive points provide a mechanism for affecting a protected center of gravity."[26] Analysis of

decisive points across centers of gravity further refines links between the levels of warfare. Analysis of decisive points should always focus on specific center of gravity relationships, rather than independent points disconnected from the greater whole. Decisive points further enable the decision making capacity to unify effort and identify lines of operation.

Organization of the decisive points across the levels of warfare effectively creates the operational design lines of operation. Overall campaign structure begins to take shape and links between lines of operation clearly follow a path all the way back to the clearly articulated end state. Effective lines of operation organize decisive points into a logical sequence in both time and space. Synchronization of lines of operation enable increased unity and integration across the full spectrum of national instruments of power. Lines of operation capture, categorize, and highlight campaign decision points critical for enhanced decision making effectiveness.

The arrangement of operations flows from the lines of operations, decisive points, centers of gravity, through end state. Arrangement of operations in the cognitive method is viewed vertically and horizontally across a two-dimensional frame as shown in Figure – 1. Joint doctrine phases provide the over-arching structure for the arrangement of operations. Joint doctrine drives the arrangement based on merging multiple actions across a common time spectrum arranged for a common purpose.[27] The arrangement further enforces unity of effort. The arrangement facilitates timely decision priorities. Decisions for force structure, required resources, and overall timelines are enhanced.[28]

Dr. Reilly adds assumptions as the final element of the operational design cognitive method. Effective assumptions "identify the greatest risk to the successful execution of the" campaign.[29] The cognitive map organizes assumptions in time, political, forces, and enemy.

Like centers of gravity, assumptions expand from the strategic to tactical levels. The impact of assumptions affects all elements of the operational design cognitive method.

Actor	Objective	Systems Analysis	Strengths	Weaknesses	Courses of Action
		Political			
		Military			
		Economic			
		Social			
		Infrastructure			
		Information			

Figure 1 Indentifying Centers of Gravity

Dr. Reilly adds assumptions as the final element of the operational design cognitive method. Effective assumptions "identify the greatest risk to the successful execution of the" campaign.[30] The cognitive map organizes assumptions in time, political, forces, and enemy. Like centers of gravity, assumptions expand from the strategic to tactical levels. The impact of assumptions affects all elements of the operational design cognitive method.

Effective operational design problem framing provides an unbiased development of military strategies. The cognitive method establishes clear linkages between problem framing elements and other operational art elements. The linkage between elements ensures a complete and thorough analysis. Effective application of the cognitive map enhances campaign development and commander decision making for the follow-on task of campaign development.

Counter-Insurgency Point of Departure

Understanding particular contextual factors such as doctrine, civilian-military relations, and war termination provide a framework for understanding ISAF methods and operational

approaches in Afghanistan. Analysis of counter-insurgency theories and principles from Sun Tzu, T.E. Lawrence, and David Galula provide a sketch for developing operational strategies.

Military doctrine and operational campaign strategies are not the same. Doctrine provides the collective whole of ideas on how military capacities are employed. Doctrine which matches military capacity in a particular warfare environment enables a commander to exploit emerging opportunities. Doctrine which bounds and handcuffs military application prevents the appropriate mix of capabilities ultimately leading to mission failure.[31] The military leader must recognize desired and undesired effects of doctrine and adjust to the particular environment.

Matching the doctrine and environment is critical for effective operational design. Conventional warfare doctrine outlines a hierarchal relationship descending from the strategic level of war to the tactical level of war. In counter-insurgency the distinct hierarchy relationships meld and the levels of warfare blend.[32] Operational planning and execution for ISAF counter-insurgency missions must blend the levels of warfare to appropriately link the strategy and tasks.

Sun Tzu provided the foundation for doctrinal emphasis when conducting warfare operations. Doctrine for Sun Tzu was one of five fundamental factors to be understood and studied.[33] Commanders must organize appropriate forces for the mission. Skill-sets must match the skill-sets for the environment. Through this, Sun Tzu expands the realm of warfare beyond the conventional realm of force on force battles. Doctrine impacts which forces engage, how those forces engage, who controls those forces, and what those forces do. Application of the appropriate doctrine, counterinsurgency doctrine, for the Afghan environment assists in the development of effective operational strategies.

Coalition military operations in Afghanistan must go against conventional US military doctrine. US military forces promote and engage all adversaries based on conventional military principles whether the operation falls in the conventional realm or not. If all you have is the hammer then everything is a nail approach won't work. American warfare focuses on massive firepower, force on force symmetric battles, and quick aggressiveness.[34] Following American doctrine is counter-productive to ISAF objectives.

Massed firepower plays to the insurgent strength. Attrition won't defeat insurgents.[35] Non-attrition tactics conflict with traditional doctrine. Force on force conventional operations cost considerable treasure and yield little return.[36] Death and destruction is just that, death and destruction. Insurgents don't assess victory based on a relative balance of destruction versus those engaged in combat. Quick aggressive patrols to round-up insurgents do more harm than good.[37] ISAF's recognition of the doctrinal contextual factor changes the mindset and the approach to coalition military operations. The ISAF doctrine must not be the conventional destruction of things, but the unconventional focus on people. To ignore the impact of doctrinal limitations is to avoid success.

Application of the military requires an honest evaluation of the environment's civilian-military relationship. The characteristics of the civilian-military relationship must be approached and analyzed from the insurgent and the counter-insurgent methods of approach. The perception of the military force itself and how the society perceives the military is very important. Roles of influence and political control within the context of the Afghanistan village or clan environment impact the civilian-military dynamic. Government forces, ISAF or Afghan forces, from outside the local area are not welcomed and must earn legitimacy.

History has shown the capacity of the civilian-insurgent partnership to manipulate and defeat a superior conventional occupation force. ISAF force application must learn from the historical perceptions of the people to avoid repeating history. T.E. Lawrence recognized the occupying force must establish a cooperative civilian-military environment in the context of the host nation. ISAF must break the link between insurgents and the population for men and materials.[38] An effective civilian-military relationship must exist for the mutual benefit of each. ISAF must reciprocate the insurgents effort and work to build a counter civilian-military relationship. Development of the relationship builds capacity for mutual defense when required and exploitation when available. The relationship takes time to establish and must conform to the local culture and needs of the society.[39] Building the Islamic Republic of Afghanistan (GIRoA) civilian-military capacity closes avenues of approach for the insurgent to maneuver around the battlefield.

ISAF must expand the realm of civilian-military relationships. An apolitical approach to operations in Afghanistan will not lead to success.[40] Civilian-military perceptions and conditions during conflict play a critical role in the Afghanistan conflict. American concepts of civilian-military relations must be balanced with the perceived and expected relationship between Afghanistan civilians and the GIRoA. The American view of professional civilian-military relationship doesn't exist in Afghanistan.

Afghanistan is a mixed ethnic tribal society operating independent of GIRoA influence. Historical GIRoA weaknesses and corruption prevented a civilian-military professional relationship. To establish a civilian-military relationship ISAF must support and partner with GIRoA security forces. The civilian-GIRoA relationship must provide security.[41] The civilian-GIRoA relationship must reduce violence and abuse of power.[42] The civilian-GIRoA

relationship must respect the people, the culture, and the religion.[43] ISAF must support and provide the foundation to build an effective and sustained civilian-GIRoA relationship within Afghanistan.

Regardless of how ISAF has operated and what has caused the current situation, how ISAF ends the conflict and establishes conditions for an enduring peace, or relative peace, in Afghanistan remain paramount. War termination and conflict resolution requires identification and recognition of conflict sources. War termination must address both conflict inducing parties, but also those third party or bystanders in the civilian population. Counter-insurgency warfare elevates the importance of the third-party actor. The population is the critical factor. Operations conducted during the conflict significantly impact war termination and resolution possibilities.

David Galula took his lessons in North Africa and Asia and outlined a population focused iterative process to facilitate counterinsurgency war termination. From the very initial stages the insurgent focuses its actions on the populace.[44] Local grievances addressed by the insurgent win the people's support. An environment for ISAF and GIRoA to establish conditions for an enduring peace must rebuff every insurgent effort for the will of the people. Insurgents build a grass roots political machine to control the population.[45] Whether legitimate or not, the public-insurgent partnership develops. Local level motives, decision making, and conflict must be addressed. ISAF and GIRoA partnership to build legitimate political capabilities must provide alternatives at the grass roots level building to the national and strategic level. Public perception of legitimacy and constructive motives is vital to lasting peace. Long-term perceptions of security and prosperity are buffeted by the short-term acts. GIRoA in the lead, supported by ISAF, must be the perception of the Afghan people.[46] The enduring effect must ultimately compel the final insurgents to capitulate and join the peaceful population.

ISAF puts the population as the focus for war termination. Appropriate application of doctrine and building civilian-military professional capacities facilitates the protection of the Afghan people.[47] War termination and a lasting peace will not come from killing insurgents, but winning the support of the people. An enduring peace for Afghanistan must thoroughly assess the conflict and the impact on the population.

ISAF recognizes interaction and sensitivities at the local level motivates individuals and tribes. Afghan people must not live in fear and must have faith in GIRoA missions.[48] ISAF must work to partner with key parties to support traditional Afghan society structures. Earning the trust of the Afghan people is an offensive mission more important than killing insurgents. Every ISAF action impacts the decision making process of the people to chose GIRoA or insurgent methods. Regularly holding meetings with community leaders builds trust and identifies opportunities to expand engagement.[49] The process must show long-term commitment and build mutual incentives for continuing peaceful conditions. Mitigation of polarizing effects moves the Afghan people towards community building, mutual trust, and confidence. War termination comes from contextual conditions oriented towards a viable and sustainable peace. War termination in counter-insurgency is the choice of the people, not the fighting forces.

From doctrine, civilian-military relations, and war termination the counter-insurgency mission places unique demands on campaign planning and operational design. US military doctrine has been slow to adapt and change to the counter-insurgency environment, but it does not preclude the development of effective strategies. Local relationships and overall perception of the affected population are critical to establishing civilian-military relationships. War termination in counter-insurgency is characterized by the perception of security and stability by the population, not the counter-insurgent's perception of security and stability.

ISAF Elements of a Cognitive Map

Clearly General McCrystal and his staff re-assessed and evaluated the Afghanistan situation as he took command. COMISAFs initial assessment is an invaluable document demonstrating the importance of operational design. General McCrystal establishes from the outset of the report the understanding of the situation must be reviewed. The whole of government approach to Afghanistan requires thorough revision starting with a fresh approach to framing the problem. Elements of doctrine, civilian-military relationships, and mission termination need analysis and adjustment.

COMISAFs opening purpose strikes straight at the challenge of articulating a coherent national strategic end state by highlighting two separate authorities asked for an assessment. The national strategic end state must balance the strategic powers; North Atlantic Treaty Organization (NATO) and US. NATO strategic end state links directly towards greater regional stability for Afghanistan thus linking to an overall reduction in the threat posed by transnational terrorists. The US administration outlines the strategic end state "to disrupt, dismantle, and eventually defeat al Qaeda".[50] From these two strategic perspectives the strategic end state for COMISAF focuses on the ability of the Afghanistan government, not a Taliban controlled government, to provide stability, security, and control of its borders. Additionally, the end state must eliminate transnational terrorism, to include al Qaeda, from establishing sanctuary within Afghanistan. Finally, Afghanistan must be a capable participant in the greater regional and global security environment.

Determination of the military end state and the associated military termination criteria requires a direct link to the strategic end state. COMISAF links a sustainable Afghan led and executed counter-insurgency as the key military end state.[51] A significant link is also made to

the military end state where an integrated civilian counter-insurgency effort matches the military effort. Without this link, the military end state does not support the national strategic end state. In order to make the link between end state and strategy the termination criteria focuses on effective governance by Afghans. To this end the military termination criteria must build the capacity of the Afghan National Security Forces (ANSF) accepted by the Afghan culture and supporting Afghan governance.[52] The COMISAF end state is a viable Afghan government supported by a credible ANSF accepted by the Afghan population.

From the end state the ISAF cognitive map objective is clearly articulated; the "objective must be the population."[53] The population focused objective extends beyond just the basics of physical security. The whole of government effort is essential to providing sustainable economic and personal well being. The objective must conform to the needs of the Afghan culture.[54] The Afghan people must select the basic services and justice from an Afghan government rather than from insurgents. Understanding the perception of the population and ensuring the effect is positive is crucial. ISAF perception of an action is not the effect to measure.

"Every action we take must enable" the focus on the population.[55] The desired effect in every action is the support of the Afghan people. Any action which places strain on the relationship between the population, Government of Afghanistan, and ISAF is an undesired effect. The Afghan people perceive ISAF operations as too reliant on fire-power, unable to keep agreements, and overly corrupt.[56] Effects for ISAF must be measured in terms of perception by the Afghan population and by the degree of integration between the whole of government approach to maximize the effectiveness of limited resources. Any effects not focused on the population are effects to be avoided.

The strategic center of gravity for ISAF is the "will and ability to provide for the needs of the population."[57] The critical capability is a trusted Afghanistan government which provides for the essential needs of the people eliminating the prospect for an insurgent to offer a better option. Critical requirements of a viable government provide the essential services free of corruption and abuse. The government must not alienate particular populations, but make them inclusive. The tribal structure of Afghanistan must enable local leaders an avenue to link local actions within the framework of national actions. The complexity of the local environments must link effects to bring about long-term effects. The historical weakness of the Afghan government is a critical vulnerability. Basic institutions of governance do not have the confidence of the population. Without the confidence of the people the efforts for governance will not achieve desired effects.

At the operational level the two main threats, insurgency and crisis in Afghan governance confidence are the centers of gravity. The insurgency has the critical capability to gain control of the population. One critical requirement is to split the population from the government and the other is to extend the timeline to outlast the coalition.[58] A critical vulnerability of the insurgency is the multi-tiered approach and multiple insurgent forces each operating with different strategic goals. The cross-section of different insurgent groups across Afghanistan breaks into the tactical centers of gravity for each local area, tribal governance, and national government link.

The operational center of gravity focused on the Afghanistan national government is essentially diametrically opposed to the insurgency. The insurgency by its very nature operates from within the population at the local level. The national government on the other hand is working top down into the local areas. The government action into the local population cannot appear preferential or corrupt.[59] The effect of the tribal culture places extreme strain and sensitivity in how perception of action is balanced against desired effect. Government initiatives

and programs must adequately address the opposing action of the insurgent. The desired effect of providing basic services for the people must not come at the cost of abusing the local people.[60] The link at each local level and the needs required for the local population is the tactical center of gravity for each local leader. Aligning the needs and facilitating national government support to those local needs meets the desired effect to extend the legitimacy of the Afghanistan government.

Lines of operation (LOO) from the assessment focus the strategic purpose along three fronts. Integration and partnership to expand the capacity of ANSF by ISAF is one. Supporting the development of capacity within the Afghan government to match that of ANSF must be a parallel LOO. Direct combat operations are the third LOO. COMISAF assessment consistently focuses on these three LOO throughout the discussion and uses their parallel nature to enhance the operational design application and understanding.

Throughout the COMISAF report decisive points are indentified. Along the ANSF LOO specific decisive points are ISAF integration at all levels, local security capacity, and sustained troop training. The Afghan government LOO must support and develop appropriate capacity for basic public services, system of uniform justice, and corrupt free processes. These two LOO share a collective challenge in detainee operations. The two must be supportive of the others efforts. Effective detainee operations have a dramatic effect on direct combat operations LOO. Within the framework of the counter-insurgency different insurgents possess different capacities and bring unique threats against ISAF. Each insurgent group must be addressed separately but in parallel to ensure the insurgents ability to govern, inform, secure, and provide economic support is outside the ISAF decision loop. Arrangement of the decisive points along the LOO ensures a coordinated effort.

COMISAF builds the operational design with three distinct phases. First, ISAF must "gain the initiative in seriously threatened, populated areas by working with GIROA institutions and people in local communities to gain their support."[61] The efforts throughout the initial phase work to diminish and limit the access the insurgent has to the population. The second phase is "strategic consolidation" where ISAFs role further places an Afghan face, force, or institution into the critical leadership role.[62] Expanded control and capacity of an Afghan led operation further extends bond between local and national Afghan leaders. Finally, the third phase is "sustained security" where ISAF moves toward "train, advise, and assist."[63] Working along the lines of operations within the construct of these phases culminates in a complete cognitive map, with the exception of assumptions, to frame the strategic problem and provide the foundation for operational design.

Although not specifically addressed as assumptions within the COMISAF report the elements of time, political factors, available forces, and enemy were outlined. Time is listed as critical to the impact of ISAF operations. Short-term, within 12-24 months, is critical for the accomplishment of the initial actions to gain the initiative. Courses of action which do not meet this time constraint will not achieve the end state. The political assumption made through the report is the cohesive or cooperative effort of NATO and US strategic end states will not further diverge from one another. It is clear throughout the assessment that ISAF cannot operate within an environment of competing end states. The available forces for ISAFs mission must operate from a new paradigm to achieve the end state. Conventional mindset, actions, and culture will not contribute to the desired effects. Forces must operate in a counter-insurgent configuration with an emphasis on understanding language, culture, and ISR. Forces which do these things properly will ultimately connect with the Afghan people. Additionally, the command

relationships must be re-organized to better enable unity of effort and improve whole of government and international actions.[64] Lastly, enemy forces receive a significant influence from outside influences. The regional stability and influence from neighboring countries can significantly alter the balance of power and influence within Afghanistan.

The COMISAF assessment is a text rich in elements of doctrinal operational design. The assessment defines the strategic and operational environment to a detailed degree which clearly establishes a framework for the development of courses of action. The objective is clear and the effects are straight forward. Centers of gravity focus effort across the levels of the war. Decisive points, lines of operation, and phases all work to integrate and culminate into the centers of gravity. Underlining it all are clear assumptions. Throughout the COMISAF assessment clear elements of operational design were identified and organized into a cognitive map. Completing the analysis provides the foundational capabilities for not only COMISAF to enhance decision analysis, but also the whole of government participants in making Afghanistan a global partner in providing security and stability against global terrorism.

<div align="center">**Cognitive Method Effectiveness**</div>

The review of COMISAFs assessment demonstrates the application of Dr. Reilly's operational design cognitive methodology works within the context of a counter-insurgency campaign. In fact, organizing the operational design with a cognitive map provides an excellent tool to explain and describe the inter-related and iterative processes involved in the strategic application of military power. As eluded to throughout the COMISAF assessment the military instrument of power does not plan and operate alone. The military end state is an end state developed from the national strategic end state.

Dr. Reilly's cognitive map is built around the planning lexicon of the military instrument of power. Although the military terminology and planning process may be different than that of other instruments of power the concept of a cognitive map just might be a tool to truly integrate efforts at the strategic and operational levels. The common link starts with each instrument of power working from the same national strategic end state. If all instruments of power could cooperatively establish a working definition for the strategic end state the development of instrument focused end states would be mutually supportive of one another.

One way to conceptually view the relationship between the instruments of power is to think three dimensionally like how the solar system operates. The sun is the national strategic end state and the common mutually supportive end state as the stream of visible light. Visualize each instrument of power as a planet. From this framework each planet rotates around the sun on a different orbit at different speeds and feels the effect of the sun differently at any given time. When cognitive maps do not align the strategic efforts between the instruments of power do not integrate as depicted in Figure – 3.
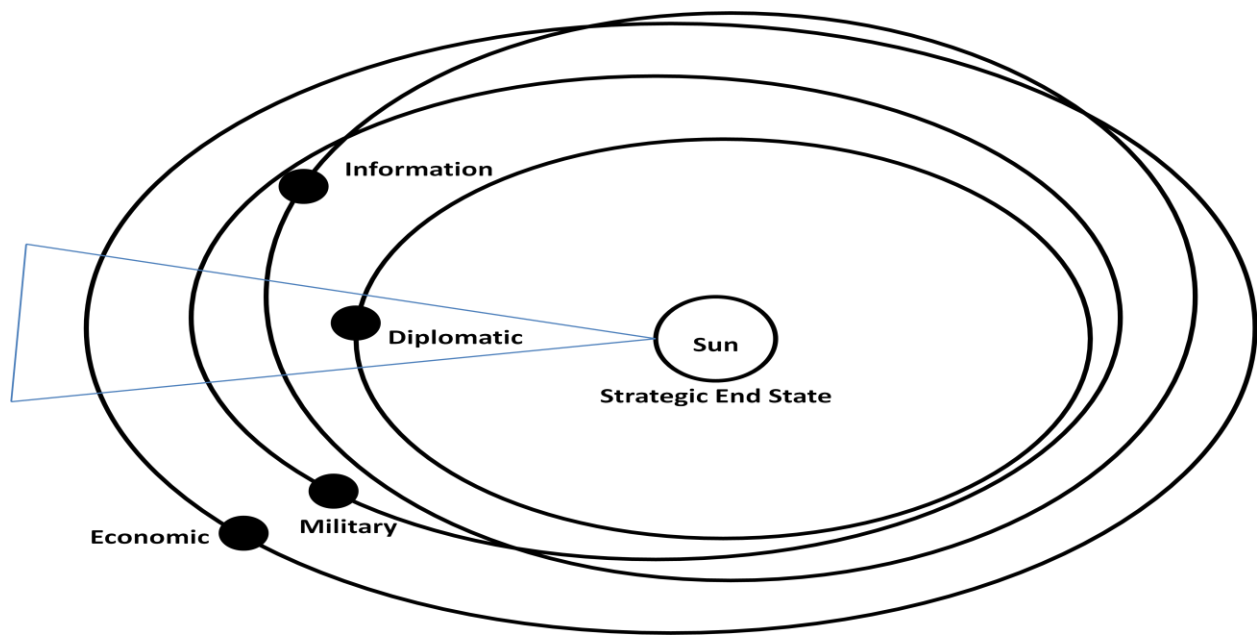

Figure 3 Mis-aligned Instruments of Power

Likewise, each instrument of power orbits and feels the effect of strategic importance at different

orbits and speeds. Recognizing the three dimensional nature of the problem in this way

highlights the complexity of aligning the instruments of power so that the speeds of their rotation

ensure each operates from the same stream of visible light as depicted in Figure – 4.

The lesson learned from the idea of a cognitive map is in the capacity to describe a

complex strategy to those specific tasks to conduct on the battlefield. Tactical tasks must

directly relate to the strategic purpose of the mission. The cognitive map is one method to do so.

Although developed from the pretext of conventional military operations the COMISAF

assessment shows the cognitive map applies to the counter-insurgency environment as well.
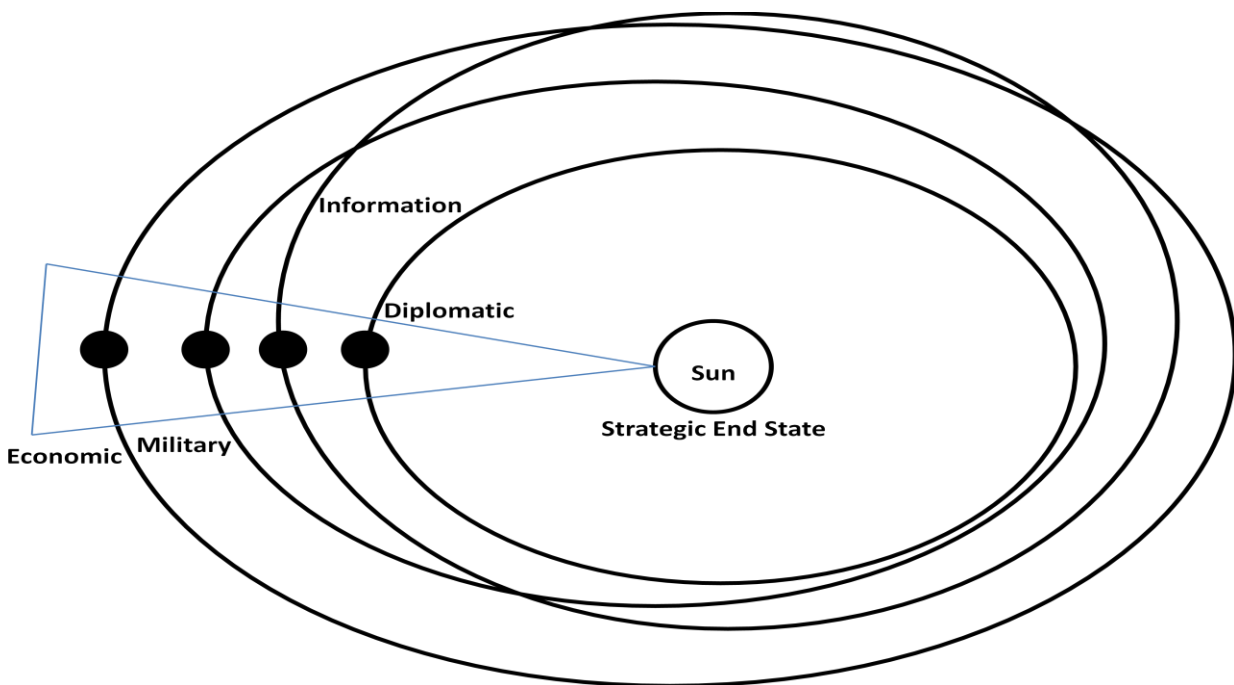

Figure 4 Aligned Instruments of Power

The three dimensional approach describes the complex iterative relationship between

tasks performed by one instrument of power effect the strategy of other instruments of power.

The relationship between instruments of power is a critical vulnerability in the execution of coalition counter-insurgency. Linking cognitive maps between the instruments of power would align the objectives and effects toward an integrated end state.

When national strategic guidance is given, different instruments of power may interpret the guidance differently. Divergent interpretation of guidance leads to divergent actions at the task level. In this case, the planets are out of alignment and receiving different streams of light. Linking cognitive maps has the potential to link varied tasks between instruments. The complementary tasks culminate into complementary desired effects. Additionally, the assumptions governing one cognitive map for an instrument of power must match that of the other instruments of power. A difference in time, politics, forces, and enemy between instruments of power highlights divergent perceptions of the environment. Mutually supportive cognitive maps enable the full capacity of each instrument of power to facilitate conditions to achieve the national strategic end state.

Application of the cognitive map should make the decision making of a leader more effective. Dr. Reilly demonstrates throughout his research there are many historical examples of how military leaders have employed their own unique cognitive map. COMISAF clearly used operational design elements which can be organized into a cognitive map to assess the current situation in Afghanistan. A cognitive map enhances decision analysis and impacts the guidance into building courses of action. Integrated cognitive maps for each instrument of power enhances whole of government efforts. Expanding the cognitive map to all instruments of power enhances our national leaders' decision analysis capacity.

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[1] Reilly, 10.
[2] Ibid., 7.
[3] Ibid., 9.
[4] JP 5-0, IV-4.

[5] Ibid.
[6] Ibid., IV-5.
[7] Ibid., III-11.
[8] Ibid.
[9] Reilly, 17.
[10] JP 5-0, III-12.
[11] Ibid., IV-8.
[12] Ibid., 19.
[13] Ibid.
[14] Ibid., 21.
[15] Ibid.
[16] Strange, 3.
[17] Reilly, 12.
[18] Strange, 4.
[19] Ibid.
[20] Reilly, 22 and Kem 71-91.
[21] Reilly, 23.
[22] Ibid.
[23] Strange, 7.
[24] Ibid.
[25] Reilly, 23 and Strange, 8.
[26] Reilly, 24.
[27] Ibid., 32-33.
[28] Ibid.
[29] Ibid., 37.
[30] Ibid., 37.
[31] Notes, ACSC AY10 Technology and Strategy, 19 October 2009.
[32] Reilly, 34.
[33] Tzu, 63.
[34] Grey, 198-204.
[35] McCrystal, 2-2.
[36] Ibid., 3-1.
[37] Ibid.
[38] Lawrence, 884.
[39] Kohn, 90-95.
[40] Gray, 198.
[41] McCrystal, 1-1
[42] Ibid.
[43] Ibid.
[44] Galula, 4.
[45] Ibid., 47.
[46] Ibid., 90.
[47] Ibid.
[48] Ibid., 2.
[49] Ibid.
[50] McCrystal, 1-1
[51] Ibid., 2-2
[52] Ibid., 1-3

[53] Ibid., 1-1
[54] Ibid., 2-10
[55] Ibid., 1-1
[56] Ibid., 2-10
[57] Ibid., 2-4
[58] Ibid., 2-5
[59] Ibid., 2-8
[60] Ibid.
[61] Ibid., 2-18-2-19
[62] Ibid., 2-19
[63] Ibid.
[64] Ibid., 1-3

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